Amendment to the specification:

Please add paragraph [0006.1] after paragraph [0006]:

[0006.1] Attempts already existed in trying to simulate a real window, U.S. Patent # 5,251,392 for example, attempted to invent an artificial window without using a display monitor. It's purpose, unlike present invention, is solely to create an apparatus, which looks like a real window without being able to see outside scene. A more closer invention relates to this one is U.S. Patent 6,140,565, in which Yamauchi, et al. disclosed a way to synthesize visual image of the music system and showed the way to create a performance situation images having open curtain. In addition, they also disclosed using sequence of images, although it is not live and stored in memory, for synthesizing of performance scene. However, there are crucial differences between current invention and the one by Yamauchi, et al. In current invention, each outside scene images is pre-segmented to partial image using the information of viewer's movement as criteria for segmentation, or the video camera is remotely controllable in the zoom and direction of sight of the camera in response to the viewer's movement in front of the monitor, which is used as a display screen in current invention. Also, the details in creating images of various curtain styles and curtain positions and the way to control the reconstructions of these images were not existed in the invention by Yamauchi, et al. In other words, they didn't have the idea to construct window covering images leaf by leaf, pleat by pleat, and control them using user interface followed by reconstruction of instant simulation images.

Please add paragraph [0013.1] after paragraph [0013]:

[0003.1] FIG. 4 shows that the segmentation of each frame of the sequence of outdoor scene images according to the viewer's position relative to the display monitor and movement detected by the motion detector.

Please replace paragraph [0014] with following amended paragraph:

[0014] In a simple surveillance system, as shown in FIG. 1, at least one video camera is used to take the pictures from desired locations and transmit the pictures at a fixed rate through wire or broadcast wirelessly through a transmitter to a receiver or multiplexer. The pictures may be processed in the multiplexer before being sent to one or more display monitors. A multiplexer accepts multiple inputs through different channels at the same time, manipulate ~~the~~ these inputs into desired video signals and output signals through multiple channels to monitors at different locations. Present invention takes wired or wireless camera input, but one input at a time and no need to send to multiple displays, so the conventional multiplexer is not needed in present invention.

Please replace paragraph [0015] with the following amended paragraph:

[0015] The dashed-line arrow and ~~dash-line~~ dashed-line block in FIG. 1 show the major parts in present invention, which do not exist in a commercial single input single output surveillance system. We see that an image processor, represented by the dashed-line block, receives signals from a receiver as well as from memory designated to store window structures and window coverings information, as represented by the dashed-line arrow, is used to create instant simulation images. The video camera may be motor-driven, controlled by the movement of a viewer in front of the flat monitor of outdoor window simulation system, the dashed-line between video camera and image processor indicates the control hardware linking the control mechanism. As shown more details in FIG. 3, the image processor creates fixed window image based on the user's choice of type of window structure and then creates a window covering image based on user's choices of type, style and color and current settings of openness and position of the window covering before combining them into a static image. This image is static in the sense that it will stay the same until user inputs new openness or new position through interface devices and consequently forces the image processor to redraw the static image. The image processor further combines the static image with a segmented version of current available image from the receiver into instant simulation image based on the viewer's movement detected by motion detector 401 shown in FIG. 4 and sends to the display monitor at a typical display rate of 30 frames per second.

Please replace paragraph [0017] with the following amended paragraph:

[0017] FIG. 2 Illustrates a more detailed embodiment of present invention. In this particular embodiment, an outdoor window with edges 210 at all four rims and a window grid 209 consists of three grid members for separating the window into six equal portions is shown. Also shown in FIG. 2 is the example of using mini-blind as the window covering. The mini-blind has an openness angle a with respect to the vertical line shown in the drawing at the first leaf 202. The gap 203 between two leafs disappears when user adjusts the openness angle a of all leafs to ~~9~~0 degree and consequently the window portion from top to the position of the end piece 208 will be fully blinded, as a real mini-blind does to a real window. Note that unless the end piece is moved to the full extension position, some of the bottom leaves 213 will remain unexpanded and have an openness angle of 90 degree. The openness angle is adjusted through the user interface device 206, which functions like a wand tilter in a real mini-blind. The device 206 can be of any kind analog switch. Shown in the drawing is a particular embodiment using turn-wheel type switch to adjust the openness angle.

Please replace paragraph [0024] with the following amended paragraph:

[0024] By comparison, the window covering image is much more involved. A shade, for example, is a piece of cloth or other material folded to have many wavy pleats and sandwiched by a top piece and an end piece wood like strips. There ~~is~~ are no leaves, so there is no ~~leave~~ leaf angle to adjust. It shelters the window from the top to the end piece and the only adjustment user can manipulate is it's position. This is an example of window covering with only one degree of freedom. In order to reconstruct the image of a shade extended to a particular position, one can digitize the entire stroke of the position of the end piece into N steps. N should be large enough

so that when end piece is moved from position i to i+1, where i+1<=N, the transition in image change should look as smooth as possible. The pleats will be stretched flatter when the end piece is moved to extend the shade, so every position i corresponds to a width w of all pleats. Because all pleats are of same size w, a total of n such size pleats connected together plus top and end pieces represent the completed shade being extended to position i. The entire shade is hold together in place by two thin ropes 212. To reconstruct the image for the entire shade extended to position i, all we need is the graphics of top and end pieces, the graphic of a pleat with width w. In other words, if in the memory we have stored graphics of top and end pieces and graphics of N pleats of distinct widths, we can reconstruct shade images for all N positions. When a user moves the increment/decrement input device starting at shade position i and finally stopping at position j, the image processor will retrieve the graphic for the pleat at each intermediate position and copy it to get a total of n pleats of the same size, combines them with top and end pieces to form a intermediate shade image, and continue to process the same way until the shade image at position j is reached. For better simulation fidelity, each graphic can have 3-D or animation effect. Each graphic of the pleat should also include small sections of the two thin ropes such that, when n graphics of the same pleats are combined together, the two thin ropes will look like extending from top piece to end piece without interruptions.

Please add paragraph [0028.1] and [0028.2] after paragraph [0028]:

[0028.1] FIG. 4 shows a viewer 402 standing in front of a monitor 400, installed at a height 410 above the ground, is used as a display screen in current invention. In order to simplify the discussion following this paragraph, the curtain image is not shown in the screen. A ground area 409 inside which the movement of the viewer can be detected and recorded as point P, with P_x and P_y as the two coordinate components. One can experience to find that when he moves forward to a real outdoor window, he will see bigger and bigger portion of the outside scene as he approaches closer to the window and vice versa when he moves away from the window. Similarly, he will see more left portion of the scene if he moves rightward and conversely he will see more right portion of the outside scene if he moves leftward. In present invention, two ways are used to simulate this effect. First, a remotely controllable motor-driven video camera can be used to aim at different directions of the outside view, in response to the change in coordinate P detected by the motion detector 401. The control mechanism can be programmed in such a way that the camera zoom will response to viewer's backward-forward motion and change the aim to left or right respectively in response to viewer's rightward or leftward movement. Secondly, if a remotely controllable video camera is not used, then we can rely on a high resolution, wide angle and still video camera to provide the sequence of outdoor scene images, performing segmentation or digital zoom to each frame of the outdoor scene images according to the movement of point P of the viewer detected by the motion detector.

[0028.2] Also shown in FIG. 4 is a possible scope 403 referring to outside scene covered either by the high resolution, wide angle and still video camera or by the motor-driven controllable one. If 403 represents the area of a frame in the sequence of outdoor scene images come from the still video camera, then area 404 can be defined as a default area in the frame from which a default outdoor scene will be displayed on the monitor, either as a beginning display or as a display when no human movement can be detected. However, when a human motion is detected inside the area 409, the segmentation scheme should immediately use the coordinate point P as newest

information for segmentation. Depending on location of point P, the segmentation scheme can perform digital zoom to cover area 405 if the viewer move forward closer to the monitor and area 406 conversely if he move backward. Similarly, the area 407 will be covered if the viewer moves rightward such that point P is in the right hand side of area 403, vice versa if point is in the left hand side for area 408 to be covered. The scope area 403 can also represent the scope limit imposed by the motor driven video camera, inside which changing of zooms and directions of sight can result in covering of different areas such as those indicated by 404 through 408.